

Applicants : Larry (NMI) DeKraker et al.
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This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-7 (canceled)

Claim 8 (original): A mechanism comprising:

first and second members having a range of movement relative to one another, each member having a generally smooth curvilinear load bearing surface and a plurality of teeth adjacent the load bearing surface, wherein the load bearing surfaces are in contact to transfer loads, and wherein the teeth of the first and second members are in engagement, at least one of the first and second members having teeth arranged in an arc that extends less than three hundred and sixty degrees about an axis defined by the arc; and

a stop limiting an allowable range of movement of a selected one of the first and second members relative to the other one of the first and second members.

Claim 9 (original): The mechanism of claim 8, including:

a base; and wherein:

the first member is rotatably mounted to the base.

Claim 10 (original): The mechanism of claim 9, including:

an adjustment member movably engaging the base, the adjustment member engaging the first member such that movement of the adjustment member rotates the first member.

Claim 11 (original): The mechanism of claim 10, including:

a resilient member engaging the base and the second member and rotatably biasing the second member relative to the first member.

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Claim 12 (original): The mechanism of claim 11, including:

an output bracket connected to the second member for biasing an associated adjustable component of a seat; and wherein:

the stop comprises a cam member having a plurality of stop surfaces configured to engage the output bracket to limit the travel of the output bracket relative to the base.

Claim 13 (original): The mechanism of claim 12, wherein:

the resilient member comprises a spring.

Claim 14 (currently amended): The mechanism of claim 10, including:

a handle; and

a clutch frictionally interconnecting the handle to the adjustment member ~~to limit~~ limiting the amount of torque that can be transmitted from the handle to the adjustment member.

Claim 15 (original): The mechanism of claim 14, wherein:

the adjustment member comprises a threaded rod.

Claim 16 (currently amended): The mechanism of claim 8, wherein:

the stop is adjustable ~~[[to]]~~ and selectively ~~[[vary]]~~ varies an allowable range of movement of the second member relative to the first member.

Claim 17 (new): The mechanism of claim 8, including:

a housing adapted to mount the mechanism to a seating unit, wherein the first and second members are substantially enclosed by the housing.

Claim 18 (new): A control mechanism for seating units, comprising:

a housing adapted to mount to a seating unit;

a compressible resilient member disposed in the housing;

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a torque member defining an effective torque arm operably connected with the resilient member such that movement of the torque member varies the amount of compression of the resilient member, the torque member having a first curvilinear rolling bearing surface and a plurality of first teeth adjacent the load bearing surface;

an adjustment member movably associated with the housing and including a second curvilinear rolling bearing surface engaging the first curvilinear load bearing surface to transfer loads, the adjustment member including a plurality of second teeth rotationally engaging the first plurality of teeth and defining a fulcrum point at which the torque member rotates relative to the adjustment member, the adjustment member being movable relative to the housing to thereby shift the fulcrum point and adjust a length of the effective torque arm.

Claim 19 (new): The control mechanism of claim 18, wherein:

the torque member includes first and second portions that together form an L-shape, with the first teeth and first curvilinear rolling bearing surface extending along the first portion.

Claim 20 (new): The control mechanism of claim 19, wherein:

the resilient member comprises a spring;
the first portion includes an end engaging the spring.

Claim 21 (new): The control mechanism of claim 20, wherein:

the adjustment member is pivotably mounted to the housing; and including:
an adjustment rod operably coupled with the adjustment member such that rotation of the adjustment rod pivots the adjustment member and shifts the fulcrum point.

Claim 22 (new): An energy mechanism for seating units, comprising:

a housing configured to be mounted to a seating unit;
a compressible resilient member;

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a torque member having an engagement portion engaging the resilient member to provide an output force for control of the seating unit;

an adjustment member engaging the torque member at a fulcrum point about which the torque member pivots;

the torque member defining an effective lever arm between the fulcrum point and the engagement portion; and wherein:

the fulcrum point shifts upon movement of the adjustment member to adjust a length of the effective lever arm without substantially changing the compression of the resilient member.

Claim 23 (new): The energy mechanism of claim 22, wherein:

the torque member and the adjustment member each have a generally smooth curvilinear load bearing surface and a plurality of teeth adjacent the load bearing surface, wherein the load bearing surfaces are in contact to transfer loads, and wherein the teeth of the first and second members are in engagement to provide non-slip rotation.

Claim 24 (new): The energy mechanism of claim 23, wherein:

the load bearing surfaces of the torque and adjustment members define an arc of constant radius.

Claim 25 (new): The energy mechanism of claim 24, wherein:

the arcs each define an axis, and the load bearing surfaces extend less than three hundred sixty degrees about each axis.